WO 2004/094639 PCT/IB2004/001583

Claims

5

15

25

1. A recombinant Fel d 1 fusion product comprising a Fel d 1 chain 1, a Fel d 1 chain 2 and a linker selected from a carbon-nitrogen bond or a short peptide linker which links the N-terminal amino acid of one chain to the C-terminal amino acid of the other chain.

- 2. A fusion product as claimed in claim 1, wherein the linker links the N-terminal amino acid of the chain 1 to the C-terminal amino acid of the chain 2.
- 3. A fusion product as claimed in claim 1 or 2, wherein the linker is a carbon-nitrogen bond.
 - 4. A fusion product as claimed in claim 1 or 2, wherein the short peptide has from 1 to 9 amino acid residues, preferably from 1 to 5 amino acid residues and particularly preferably from 1 to 3 amino acid residues.
 - 5. A fusion product as claimed in any preceding claim, wherein the linker comprises a target site for a reagent capable of selective cleavage of the linker.
- 20 6. A fusion product as claimed in claim 5, wherein the reagent is an enzyme.
 - 7. A fusion product as claimed in any preceding claim, wherein the chain 1 and the chain 2 are covalently bonded together by one or more disulfide bridges into an antiparallel arrangement.
 - 8. A fusion product as claimed in any preceding claim, wherein the Fel d 1 chain 1 comprises a sequence of SEQ ID NO 1, or a homologue or fragment thereof which provides substantially the same allergenic properties as SEQ ID NO 1.
- 30 9. A fusion product as claimed in any preceding claim, wherein the Fel d 1 chain 2 comprises a sequence of SEQ ID NO 2, SEQ ID NO 3, or a homologue or fragment thereof

WO 2004/094639 PCT/IB2004/001583

which provides substantially the same allergenic properties as SEQ ID NO 2 or SEQ ID NO 3.

- 10. A fusion product as claimed in claim 8 or 9, wherein the homologue has greater than
 90% homology, preferably greater than 95% homology and particularly preferably greater than
 99% homology.
 - 11. A fusion product as claimed in any preceding claim, comprising a sequence of SEQ ID NO 4.
- 12. A homodimer consisting of two non-covalently associated fusion products as claimed in any preceding claim

10

15

20

- 13. A DNA sequence encoding the fusion product as claimed in any of claims 1 to 11.
- 14. An expression vector having the DNA sequence as claimed in claim 13 inserted therein in an operable form.
 - 15. A host cell transformed with the expression vector as claimed in claim 14.
- 16. A pharmaceutical composition comprising an immunotherapeutically effective amount of the fusion product as claimed in any of claims 1 to 11 and/or the homodimer as claimed in claim 12 and a pharmaceutically acceptable carrier, excipient or diluent.
- 17. Use of the fusion product as claimed in any of claims 1 to 11 and/or the homodimer as claimed in claim 12 for the preparation of a medicament for the treatment or prevention of cat allergy.
- 18. A kit for the diagnosis of cat allergy comprising the fusion product as claimed in any of claims 1 to 11 and/or the homodimer as claimed in claim 12 and instructions for use of the kit.

WO 2004/094639 PCT/IB2004/001583

19. A method for diagnosing cat allergy comprising the step of combining a sample taken from a subject with the fusion product as claimed in any of claims 1 to 11 and/or the homodimer as claimed in claim 12.

- 5 20. A process for preparing a fusion product as claimed in any of claims 1 to 11 comprising the step of culturing the host cell as claimed in claim 15 in a suitable medium.
- 21. A process for preparing a recombinant Fel d 1 polypeptide comprising the steps of synthesising the fusion product as claimed in claims 5 or 6 and selectively cleaving the linker.